

REMARKS

Claims 1-44 were presented for examination.

Claims 1-7, 9, 16-22, 25-29, 33, 34, 38-42, and 44 were rejected.

Claims 8, 10-15, 24, 30-32, 36, 37, and 43 were objected to.

Summary of the Interview

Applicant thanks the Examiner for his time in conducting a telephone interview on December 20, 2007. During the telephone interview, Applicant's attorneys Michael Farn and Jon Burbage and the Examiner discussed claim 1 as previously presented and the rejections outstanding in the Examiner's office action.

Agreement was reached that independent claim 1 as previously presented is patentable over the cited references. Agreement was reached that neither Dimmler (US Pub. No.: 2003/0067657) nor Presby (US Pub. No.: 2003/0001073 A1) teach or suggest an optical-to-electrical converter that produces an intermediate electrical signal, where the intermediate electrical signal contains both data encoded onto the optical beam and wavefront information that is sensed from a wavefront of the optical beam by the optical-to-electrical converter, as recited in claim 1. Agreement was also reached that it would not have been obvious to modify or combine Dimmler and Presby in a manner to obtain the claimed optical-to-electrical converter.

The Examiner agreed to withdraw the current rejection.

The issues discussed during the interview are summarized in more detail below.

Claims 1-7, 9, 16-22, 25-29, 33, 34, 38-42, and 44: Neither Dimmler, Presby, Devon, nor Hirohashi, either alone or in combination, teach or suggest sensing wavefront information from the wavefront of the optical beam.

All independent claims 1, 16, 29, 34, 38 and 42 and some of the dependent claims were rejected under 35 U.S.C. § 103 over Dimmler in view of Presby, sometimes in combination with various secondary references (Devon and Hirohashi). These rejections are traversed.

Claim 1 recites an optical-to-electrical converter that produces an intermediate electrical signal which must contain both (1) data (which was encoded on the optical beam) and (2) wavefront information sensed from a wavefront of the optical beam by the optical-to-electrical converter. In other words, the optical-to-electrical converter functions both to recover data from the optical beam and to sense the wavefront of the optical beam. Claim 16 expressly recites a combined wavefront/data sensor with similar limitations. Examples of such an optical-to-electrical converter include device 420 of Applicant's FIG. 4, and wavefront/data sensor 820 of Applicant's FIG. 8.

Neither Dimmler nor Presby nor any of the other references teach or suggest a combined wavefront sensor and data detector. Both Dimmler and Presby use two separate devices: one wavefront sensor and a separate data detector. Dimmler's Figure 2 shows two separate devices: wavefront sensor 58 and communication receiver 68. Some of the data extracted by Dimmler's communication receiver 68 may include wavefront and pointing and tracking information (par 0027), but this is wavefront information that was sensed elsewhere, encoded onto the optical beam and extracted by the receiver. It is not wavefront information that was sensed by the communication receiver 68 itself. Presby's Figure 4 also shows two separate devices: sensor

430 and receiver 433. Neither Devon nor Hirohashi overcome these fundamental limitations in Dimmler and Presby.

Applicant therefore respectfully requests that these rejections of the claims be withdrawn.

Claims 8, 10-15, 24, 30-32, 36, 37, and 43 are in condition for allowance.

Claims 8, 10-15, 24, 30-32, 36, 37, and 43 were objected to as being dependent upon a rejected base claim. As all independent claims are now in condition for allowance, Applicant respectfully requests that these objections be withdrawn.

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Closing

Applicant believes that the application is in condition for allowance of all claims herein, and therefore an early Notice of Allowance is respectfully requested. If the Examiner believes that for any reason direct contact with Applicant's attorney would help advance the prosecution of this case to finality, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,

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